

# MONTHLY WEATHER REVIEW.

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## INTRODUCTION.

The MONTHLY WEATHER REVIEW for October, 1904, is based on data from about 3300 stations, classified as follows:

Weather Bureau stations, regular, telegraph, and mail, 167; West Indian Service, cable and mail, 4; River and Flood Service, regular 43, special river and rainfall, 190, special rainfall only, 56; voluntary observers, domestic and foreign, 2565; total Weather Bureau Service, 3025; Canadian Meteorological Service, by telegraph and mail, 20, by mail only, 13; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Southern Pacific Company, 96; Hawaiian Meteorological Service, 75; Jamaica Weather Service, 130; Costa Rican Meteorological Service, 25; The New Panama Canal Company, 5; Central Meteorological Observatory of Mexico, 20 station summaries, also printed daily bulletins and charts, based on simultaneous observations at about 40 stations; Mexican Federal Telegraph Service, printed daily charts, based on about 30 stations.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. R. C. Lydecker, Territorial Meteorologist, Honolulu, Hawaii; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; Lieut. Commander H. M. Hodges, Hydrographer, United States Navy; H. Pit-

tier, Director of the Physico-Geographic Institute, San José, Costa Rica; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; Rev. José Algué, S. J., Director, Philippine Weather Service; and H. H. Cousins, Chemist, in charge of the Jamaica Weather Office; Señor Enrique A. Del Monte, Director of the Meteorological Service of the Republic of Cuba.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the Review, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is  $157^{\circ} 30'$ , or  $10^{\text{h}} 30^{\text{m}}$  west of Greenwich. The Costa Rican standard meridian is that of San José,  $5^{\text{h}} 36^{\text{m}}$  west of Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local standard is mentioned.

Barometric pressures, whether "station pressures" or "sea-level pressures," are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

## FORECASTS AND WARNINGS.

By Prof. ALFRED J. HENRY, temporarily in charge of Forecast Division.

The weather over the North Atlantic during the first decade of the month was not characterized by gales of unusual character for the season, although a marked barometric depression, that was central on the 1st over the Canadian Maritime Provinces, moved slowly eastward over the Atlantic on the 2d. During the second decade of the month the disturbances which passed over the Atlantic from the North American Continent were generally without marked energy. Fresh westerly gales prevailed over the northern portion of the British Isles and to the westward over the Atlantic on the 16th and 17th, and again on the 20th and 21st. During the last decade of the month a tropical disturbance moved rapidly northeastward from the Carolina coast, where it was central on the evening of the 20th, and disappeared east of the Canadian Maritime Provinces on the 23d. Unsettled weather, with occasional moderate gales, prevailed as far south as the Azores on the 25th and 26th. The observatory at Horta reported a maximum wind velocity of 60 miles an hour from the northeast on the morning of the 26th. A disturbance evidently moved east-southeast from the Azores to the coast of Spain during the 27th, 28th, and 29th. The month closed with the advance of an area of high pressure from the American Continent, although fresh north to west gales prevailed in the vicinity of Bermuda on the morning of the 31st.

In the United States the barometric disturbances of the month were confined mostly to the northern portion of the country. With one or two exceptions, they possessed no fea-

tures worthy of mention. A shallow disturbance was noted over the Caribbean Sea as early as the 10th. It moved slowly west-northwest during the 11th and 12th, and by the morning of the 13th its northward advance was made apparent by moderate easterly winds attended by rain on the southeast Florida coast. At no time during the 10th, 11th, and 12th was the center of the disturbance near enough to any observation station to enable the officials of the Bureau to determine its intensity and probable direction. High winds set in over southern Florida on the 14th, continuing during the 15th, and attaining hurricane force on the evening of the 16th, at which time telegraphic communication with the southeast Florida coast was interrupted. On the morning of the 17th the wind at Jupiter, Fla., was blowing from the eastward with a velocity of 60 miles an hour. It increased during the day to 68 miles, and diminished rapidly during the evening. The center of the storm apparently remained stationary over southern Florida from the morning of the 17th until the morning of the 19th. It diminished greatly in energy, and during the 19th only moderate winds were experienced, except at Jacksonville, where a northeast wind of 32 miles an hour was recorded. During the night of the 20th a fresh center appears to have developed a short distance off the South Carolina coast. This new center moved rapidly north-northeast, passing Wilmington, N. C., about 3 a. m. of the 21st and Philadelphia, Pa., about 9 a. m., and disappearing over the Canadian Maritime Provinces on the evening of the 21st. In its northward course it was